What is claimed is:

1. A method for identification of non-immunoglobulin peptides having an affinity for the surface of fungi comprising:

(a) constructing a library of peptides by,

(i) preparing random oligonucleotides;

(ii) inserting said oligonucleotides into an appropriate vector that expresses peptides encoded by said random oligonucleotides on its surface and is capable of transfecting a host cell;

(iii) transfecting an appropriate host cell with said vector to amplify said vector in an infectious form to create a library of peptides on the surface of said vector;

(b) contacting said vector expressing said peptide library with a target fungus and removing unbound vector;

(c) eluting bound vector from said fungi;

(d) amplifying said bound vector;

(e) sequencing the oligonucleotides contained in said eluted vector;

(f) deducing the amino acid sequence of peptides encoded by said oligonucleotides contained in said eluted vector; and

(g) selecting the non-immunoglobulin peptides.

2. The method of claim 1, further comprising repeating steps (b) through (d) at least once.

3. The method of claim 1, wherein said vector is a fusion phage vector.

4. The method of claim 1, wherein said vector is a fusion phage vector selected from the group consisting of type 8, type 88, type 8+8, type 3, type 33, type 3+3, type 6, type 66, type 6+6, phage T7 and phage 8.

5. The method of claim 1, wherein the sequence of said random oligonucleotide is GCA GNN $(NNN)_7$ or SEQ ID NO: 1.

6. The method of claim 1, wherein said peptide is expressed as part of a coat protein of said vector.

7. The method of claim 6, wherein said coat protein is a pIII or a pVIII coat protein.

8. The method of claim 1, further comprising estimating the binding affinity of said peptides to said target fungus.

9. The method of claim 1, wherein said peptides contain from 6 to 15 amino acids.

10. A composition comprising at least one substantially purified peptide selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 24, SEQ ID NO: 31, SEQ ID NO: 33, and SEQ ID NO: 4.

11. The composition of claim 10, wherein said composition is an antifungal composition.

12. The composition of claim 11, wherein said composition alters the life cycle of members of the genus *Phytophthora*.

13. The composition of claim 12, wherein said composition alters the life cycle of *Phytophthora capsici*.

14. A recombinant polynucleotide comprising a sequence encoding a peptide selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 24, SEQ ID NO: 31, SEQ ID NO: 33, and SEQ ID NO: 4.

15. A recombinant vector comprising a nucleotide sequence encoding a peptide selected from the group consisting of SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22, SEQ ID NO: 24, SEQ ID NO: 31, SEQ ID NO: 33, and SEQ ID NO: 4.

16. A cell transformed with the recombinant vector of claim 15.

17. The cell of claim 16, wherein said cell is a plant cell.

18. An expression cassette comprising as operatively linked components, a promoter, a nucleotide sequence of claim 14, and a transcription termination signal sequence.

19. The expression cassette of claim 18, further comprising an operatively linked secretion sequence.

20. The expression cassette of claim 18, wherein said promoter is a tissue specific promoter.

21. The expression cassette of claim 18, wherein said promoter is a plant promoter.

22. A transgenic plant comprising the expression cassette of claim 21.

23. A method for screening peptides for the ability to affect development of a fungus comprising:

(a) constructing a peptide library by,

(i) preparing random oligonucleotides;

(ii) inserting said oligonucleotides into an appropriate vector that expresses peptides encoded by said random oligonucleotides on its surface and is capable of transfecting a host cell;

(iii) transfecting an appropriate host cell with said vector to amplify said vector in an infectious form to create a library of peptides on said vector;

(b) contacting said vector expressing said peptide library with a target fungus and removing unbound vector;

(c) eluting bound vectors from said fungus;

(d) amplifying said bound vectors;

(e) isolating the oligonucleotides contained in said eluted vectors;

(f) producing the peptides encoded by said oligonucleotides contained in said eluted vectors;

(g) contacting said peptides with a target fungus; and

(h) determining the effect of said peptides on said fungus.

24. The method of claim 23, further comprising repeating (b) through (d) at least once.

25. The method of claim 23, wherein said vector is a fusion phage vector.

26. The method of claim 23, wherein said vector is a fusion phage vector selected from the group consisting of type 8, type 88, type 8+8, type 3, type 33, type 3+3, type 6, type 66, type 6+6, phage T7 and phage 8.

27. The method of claim 23, wherein the sequence of said random oligonucleotide is GCA GNN $(NNN)_7$ or SEQ ID NO: 1.

28. The method of claim 23, wherein said peptide is expressed as part of a coat protein of said vector.

29. The method of claim 28, wherein said coat protein is a pIII or a pVIII coat protein.

30. The method of claim 23, wherein said peptide is contacted with said target fungus at different life stages of said fungus.

31. The method of claim 30, wherein said life stage is the zoospore life stage or the germling life stage.